

INFORMATION LETTER

Not for
Publication

NATIONAL CANNERS ASSOCIATION

For Members
Only

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Revised Corn Standards Proposal

A revised tentative order proposing a standard of identity for canned corn and canned field corn, a standard of quality for canned corn, and a partial standard of fill of container for canned corn and canned field corn was published in the *Federal Register* of June 20. The text of the proposed standards together with the proposed findings of fact on which the standards presumably are based is reproduced beginning on page 244 of this issue of the INFORMATION LETTER.

The revised corn standards proposal represents the form of order which the Food and Drug Administration, after consideration of the evidence received at the public hearing, the briefs and proposals filed subsequent to the hearing, and the exceptions filed to the first tentative order published in the *Federal Register* of April 12, 1950, believes is suitable for adoption. Exceptions to the present proposal may be filed with the Federal Security Agency through July 5. Canners who wish to offer objections to any features of the present proposal should indicate to the N.C.A. at the earliest possible date the points on which they desire exceptions to be taken.

The present proposal does not differ markedly from the first tentative order made public on April 12, 1950. Some of the recommendations made by the N.C.A. in its exceptions and brief filed on June 5, 1950, have been adopted in whole or in part. Other features of the proposed order of April 12, 1950, to which the Associa-

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Canned Foods Carloading

The effective date of Car Service Order 878, prescribing minimum carloading requirements for canned foods, has been postponed by the Interstate Commerce Commission until July 16.

Car Service Order 878 was scheduled to be effective July 1. The postponement was ordered by ICC on June 20.

On June 28, the N.C.A. Traffic Committee will meet at Association headquarters, and on June 29 with the Director of the ICC Car Service Division, at his request, to discuss certain provisions of the order.

Attendance Figures Sought For West Coast Dedication

The West Coast Building Dedication Committee has held meetings recently to formulate initial plans for Dedication Ceremonies October 11 and 12 for the new N.C.A. Western Branch Laboratory building at Berkeley, Calif.

Because hotel facilities in San Francisco and Berkeley are limited, the Committee decided to issue an advance inquiry to Association members in an effort to ascertain how many persons plan to attend. Secretary Campbell accordingly issued a letter to member firms June 21, enclosing a return postcard, and urging that these be returned by July 1, so as to enable the Committee to proceed with the drafting of invitation lists, program, hous-

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Production and Acreage Of Processing Vegetables

The indicated 1951 production of green peas for canning and freezing was reported late yesterday by the Bureau of Agricultural Economics at 499,020 tons, based on conditions as of June 15. This is 15 percent more than the 1950 production of 433,830 tons. Details will be reported in next week's issue of the INFORMATION LETTER.

BAE reported that 1950 acreage of sweet corn for processing will total 468,810 acres, 30 percent above the 359,530 acres planted in 1950; acreage of snap beans for processing is to total 130,490 acres, 9 percent more than the 119,520 acres planted last year; acreage of cucumbers for pickles will total 159,380 acres, up 29 percent over 1950 plantings of 123,870 acres.

Ruling on Walsh-Healey Act Exemption Being Prepared

A ruling on the matter of a Walsh-Healey exemption for contracts for certain canned fruits and vegetables is being drafted by the Wage and Hour and Public Contracts Divisions of the Labor Department.

The ruling is being prepared under the direction of F. Granville Grimes, Jr., Deputy Administrator, who was presiding officer at the hearing held June 11. It is expected that the ruling will be submitted to the Secretary of Labor for review and approval at an early date.

The N.C.A. has been advised that issuance of the decision is being expedited. Whether the exemption will be approved or disapproved will not be known at least until next week.

Defense Production Act

The Senate is scheduled to begin consideration of amendments to the Defense Production Act on Monday, June 25, when the recommendations of the Senate Committee on Banking and Currency, adopted on June 21 following over a week of intensive study in executive session, will be made the order of Senate business.

The bill to be presented to the Senate would extend the present Act for eight months. It contains only one change from the present law of significance to the canning industry. This change, designed to prohibit price roll-backs, would add to the present control sections of the law the following provision:

"Section 402(d)(4). After the enactment of this paragraph no ceiling price shall become effective which is below the lower of (a) the price prevailing just before the date of issuance of the regulations or order establishing such ceiling price, or (b) the price prevailing during the period January 25, 1951, to February 24, 1951, inclusive."

The House Committee on Banking and Currency also concluded its consideration of amendment of the Act on June 21; but it is not expected that

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DEFENSE

OPS Answers Questions on Applicability of CPR 22

The Office of Price Stabilization has responded to a letter from N.C.A. requesting official interpretations on questions relating to ceiling prices of certain canned foods.

The N.C.A. requested answers that could be published in the INFORMATION LETTER.

The N.C.A. letter asked, first, whether the following commodities must be priced under CPR 22:

Canned carrots, beets, sweet potatoes, and white potatoes, packed immediately after harvest or from storage, in some instances by the same processor;

Catsup and canned tomato aspic, packed at time of harvest or from canned pulp;

Canned onions; sauerkraut, both bulk and canned; canned sauerkraut juice; canned mushrooms; pickles, salt stock and fresh pack; chili sauce; canned ripe olives; and cider vinegar.

A second question was whether Section 10 of CPR 22, covering material cost increases, applies to closing machine rentals; and, if so, does the cut-off date of December 31, 1950, permit an allowance for increased rentals recently authorized by OPS in response to a Federal Court decision.

Also, what cognizance is OPS giving to restrictions on production occasioned by the tin conservation order, M-25?

Also, how does a processor who re-packs imported olives figure his ceiling price?

Following is the full text of the letter received from W. G. Carberry, Chief of the Fruit and Vegetable Branch, Food and Restaurant Division of OPS, in response to the N.C.A. letter:

This is in reply to your June 4, 1951, letter, regarding the applicability of respective Ceiling Price Regulations to certain listed canned food products as well as certain other relevant information which you feel would be helpful to members of the National Canners Association.

There have been interpretations given in specific cases which substantiate the fact that certain of the products you specify are considered to be under the provisions of the General Ceiling Price Regulations. These include:

Canned carrots; canned sweet potatoes; canned onions; catsup; canned ripe olives; canned beets; canned

white potatoes; chili sauce; pickles, fresh pack.

The following products are considered under Ceiling Price Regulation 22:

Sauerkraut, both bulk and canned; canned mushrooms; canned tomato aspic; canned sauerkraut juice; cider vinegar.

Interpretation has been made indicating that Section 10 of Ceiling Price Regulation 22 does not permit a canner to make an adjustment for increases in rentals of closing machines occurring subsequent to his base period.

With respect to your reference, we are aware of the present and potential limitations imposed by the conservation order, M-25, and shall give consideration to the effects in relation with OPS regulations.

Amendment 10 to CPR 22

The Office of Price Stabilization has issued Amendment 10 to Ceiling Price Regulation 22 which governs ceiling prices of a number of nonseasonal canned products. This amendment contains miscellaneous changes which clarify the language of some provisions, provide new options for determining material costs and permit unemployment insurance payments to be reflected in labor cost calculations. The amendment was effective June 19.

Sections 7-9 of CPR 22 provide the method for the calculation of labor cost adjustments. Section 8 has been amended to permit a canner to reflect in his ceiling price any increases in the cost of required payments under the Federal Insurance Contributions Act, the Federal Unemployment Tax Act and any state or local unemployment compensation laws ensuing between the end of his base period and March 15, 1951. Furthermore, the provisions on labor cost adjustments have been clarified to conform to earlier interpretations issued on CPR 22. The amendment specifically provides that wage increases or "fringe benefits" granted or determined after March 15, 1951, which were retroactive to March 15, 1951, or any prior date, may not be included in the labor cost adjustment even when made pursuant to contracts in effect on March 15, 1951.

Section 18 of Ceiling Price Regulation 22 lists a number of sources of net price per unit to be used in determining the net cost of a manufacturing material as of a prescribed date for purposes of calculating the permitted materials cost adjustment. The canner is instructed to use the first of the listed prices available to him. Prior to the present amendment there was the limitation that the price per unit of deliveries made more than 30 days before the prescribed date could not be considered and the price per unit in contracts entered into or offers made more than 60 days prior to the prescribed date could not be considered.

Amendment 10 has changed this by listing at the end of Section 18 three additional choices of prices. When a canner cannot determine his costs of material by use of the methods originally contained in CPR 22, he is now permitted to use the net price per unit of material shown on the invoice for the last delivery date even though made more than 30 days before the prescribed date. In addition, the net price per unit of material in the last contract entered into or written offer made prior to the prescribed date may be used even though entered into or made more than 60 days before the prescribed date. Canners may elect not to use these additional pricing methods if they believe that the material cost changes determined thereunder do not reflect appropriate changes in the cost of any material.

Section 33 of CPR 22 prescribes the method for computing ceiling prices for commodities in new categories, for new sellers and for rates to an entirely new class of purchaser. It provides for borrowing a ceiling price from the canner's most closely competitive seller. This section has been amended to require that the ceiling price borrowed from the most closely competitive seller must be one calculated under Ceiling Price Regulation 22.

Section 37 of CPR 22 as originally issued provided that ceiling prices once determined and reported could not be redetermined except in the case of redetermination due to increases in cost of agricultural commodities or products processed therefrom. This section has been amended to provide a number of additional exceptions. Ceiling prices may be recomputed when based upon changes resulting from amendments, supplements, revisions or official interpretations of the regulation. In such cases an amended Form No. 8 must be filed. To take into account the extension of the effective

tive date of the regulation to July 2, 1951, another exception permits canners who have already filed their ceiling prices on Form No. 8 to redetermine their ceiling prices and file an amended Form No. 8 provided they do so before July 2, 1951. Finally, when a canner's base period price is used as his ceiling price, without the addition of any material or labor cost adjustment, or when only one of the adjustments has been made, his ceiling price may be redetermined to include the omitted calculations. The redetermination must be made by filing an amended Form No. 8.

Sugarcane on Parity Lists

The Office of Price Stabilization on June 20 added sugarcane to the list of agricultural commodities in Section 11(a) of the General Ceiling Price Regulation and to the list of agricultural commodities in Appendix C of the General Manufacturers Ceiling Price Regulation, CPR 22, thereby permitting manufacturers pricing under either of these two regulations to apply the pass-through provisions to current cost increases on sugar derived from sugarcane.

Under the provisions of the GCPR, prior to this amendment, manufacturers and processors using sugar processed from sugar beets, which are on the Section 11(a) list of agricultural commodities, have been permitted to increase the prices of their products to reflect increased costs to them of such sugar. Those using sugar processed from sugarcane, however, which was removed from the Section 11(a) list by Amendment 1 to GCPR, have only been permitted to reflect the increased cost of such sugar up to February 12, 1951. Amendment 15 to GCPR reinstates sugarcane on the Section 11(a) list so that a current date may be used in calculating the increased costs of that commodity or the sugar processed therefrom.

The companion amendment to CPR 22, issued as Amendment 9, takes sugarcane from the Appendix A list of commodities for which the cost increase pass-through privilege was cut off as of March 15, 1951, and places it on the Appendix C list of commodities which are selling below the legal minimum and to which the cost increase pass-through provision is still applicable. Manufacturers pricing under CPR 22 who use sugar from sugarcane are therefore given the same pass-through privilege as manufacturers using sugar from sugar beets.

N.C.A. Asks Consideration Of Industry Wage Problem

Many canners have called to the attention of the N.C.A. the inequitable effects of the wage freeze on seasonal canning operations in areas where defense production activity has begun or military installations have been reactivated since the close of the 1950 canning season. The urgency of these problems has prompted the N.C.A. to write Chairman George W. Taylor of the Wage Stabilization Board the following letter requesting prompt consideration of applications for relief submitted by individual canners or state or local groups:

The National Canners Association urgently requests that the Wage Stabilization Board give immediate consideration to the impossible position in which many canners of seasonal agricultural and fishery products have been placed as a result of the wage freeze, and the action of the Board in allowing agricultural wages to be advanced to 95 cents an hour.

Seasonal canning operations terminate each year with the harvests of agricultural commodities. Thus canning plants handling seasonal commodities closed down in the fall of 1950 at wage scales in effect during that summer. In the last quarter of 1950, however, wage rates advanced rapidly in those communities and localities in which defense plants became operative, and in which military installations were reactivated. Canners in these locations now find themselves saddled with base cannery rates that do not reflect the wage freeze levels prevailing in other local non-seasonal industries.

In addition, many canners of seasonal products have had their wage problem inequitably affected by the Board's action in authorizing increases in agricultural labor rates up to 95 cents an hour. Wage rates paid by canners for in-plant work are intimately related to the prevailing farm wage scales, principally because much of a canner's labor force comes from the local farm community and is employed in agriculture during most of the year. The inequity is apparent when it is realized that the farmer has been permitted to raise wage rates in excess of 10 percent, but his cannery neighbor is prohibited from maintaining the relative wage differentials that generally exist between field and plant occupations.

Foods grown for processing must be canned immediately following harvest—literally within a matter of a few hours. Most processing vegetables are contracted for in advance of harvest and no other market exists for the vast majority of the grower's pro-

duction of canning crops. This year the national economy cannot afford to lose any of the expected canned food production. Military requirements have assumed vital importance. These requirements for 22 of the seasonally packed canned foods range from 10 percent to 41 percent of last year's production. Over all, the military requirements of 32 seasonally canned foods will take approximately 15 percent of this year's production.

Canners must pack the growers' harvest. The canner is under a moral and contractual obligation to the farmer. From the point of view of the Wage Stabilization Board and over-all government defense program, he also is under an obligation to his country to meet the all-out production goals demanded by the present emergency defense program. There is no doubt that the industry will meet these obligations.

Obviously, however, under the currently acute labor supply situation canners must meet the wage competition of the adjacent defense plants and military installations. Under the present inequitably applicable wage restrictions, many in the canning industry, technically, will find it impossible to maintain production without becoming in violation of the wage freeze order.

Therefore, the Association calls this problem to the attention of the Board and asks that the Board give immediate consideration to pending and future applications for relief by individual canners or local area groups.

Pricing of Canned Soups

Members of the Canned Soup Industry Advisory Committee, in their first meeting with the Office of Price Stabilization on June 14, proposed that a tailored regulation providing for "line pricing" be adopted for their industry.

In "line pricing" a group of commodities has the same selling price although the cost of the raw materials may have varied.

According to an OPS announcement, industry spokesmen said that a canned soup regulation, in addition to line pricing, should permit cost adjustments to cover increased costs of cans, labels, cases, and labor, as well as raw materials.

They urged that action on a regulation be taken as soon as possible, OPS said, because summer vegetables soon will be coming to market. Their first problem, OPS was told, is tomato soup. Members said they would like a temporary provision covering this pack, pending the adoption of a regulation for the entire canned soup industry.

PROCESSING

No Early Prospect for Food Preservation with Antibiotics

Use of antibiotics for the preservation of canned foods is not an early prospect, according to an address by Dr. E. J. Cameron, Director of the N.C.A. Washington Research Laboratory, before a session of the Institute of Food Technologists on June 20.

Some public claims have been made that sterilization can be achieved by addition of small amounts of subtilin, an antibiotic, to canned foods, the sealed cans being then given a mild heat treatment instead of the high-temperature processing conventionally used in canning. With regard to such claims, Dr. Cameron stated:

"No antibiotic has been found thus far that will destroy the typical spoilage organisms encountered in canning, nor any that will kill *Clostridium botulinum*, the only food poisoning type of importance."

He reported that during 1950 the N.C.A. Research Laboratory and several other groups investigated the sterilizing effects of a number of antibiotics, including subtilin, against the spore-forming organisms now controlled by high-temperature processing. "None of these show promise," he stated.

Dr. Cameron, however, recommended against suspending such studies merely because no ideal antibiotic for preservation has yet been discovered. "In the canning industry," he said, "there is general agreement that the advantage that would derive from the ability to substitute low-temperature for high-temperature treatment of certain products amply justifies our plan to continue giving attention to this problem."

Dr. Cameron favors initial laboratory testing to determine the basic bacteriological facts. "Under laboratory conditions it has to be shown that the antibiotic is capable of destroying spores of the organisms that must be controlled in conventionally heat-processed canned foods. It must be demonstrated beyond doubt that spores of *Clostridium botulinum* will be destroyed."

Should laboratory tests, with companion experimental packs, demonstrate the ability to destroy these spores and other spoilage organisms of economic importance, it will then become necessary to extend the studies into the industrial and public health fields, he asserted.

Dr. Cameron stated that the future N.C.A. program for antibiotics will utilize the pattern of investigation described in his paper. It has been followed thus far, he said, in testing several antibiotics, "all of which have failed to meet the basic test—ability to destroy spores of *Cl. botulinum*."

"In the case of subtilin, to which most attention was directed, there has been further proof of ineffectiveness furnished by results of experimental packs which demonstrated that it lacked destructive ability not only against *Cl. botulinum* at a low level of contamination, but also against other spoilage organisms."

Laboratory Issues Report on Fluoride in Water

The latest in the series of special reports compiled by the N.C.A. Washington Laboratory, Research Report No. 6-51, "Use of Fluoridated Water in Canning", has just been issued, and copies are available on request to the N.C.A. Research Laboratories in Washington.

Preparation of this report was occasioned by the growing practice of adding fluoride to public water supplies as a means of reducing tooth decay, and by the concern expressed by some canners over possible effects of this measure on canning operations or canned products. The report gives background information on the fluoridation program and the occurrence of fluoride in natural water supplies. It indicates that current information discloses no cause for alarm either as to technical hazards or effect on the legal status of canned foods which have been prepared with the use of fluoridated water.

Defense Production Act

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the House will take up the bill until Wednesday, June 27. The House Committee voted to place this limitation in the agricultural pricing provisions of Section 402(d) of the law:

"No ceiling shall be established or maintained for any agricultural commodity below 90 per centum of the price received by grade by processors on May 19, 1951, as determined by the Secretary of Agriculture."

To add to the Congressional sentiment against price rollbacks, the House Committee on Agriculture instructed Chairman Cooley to introduce a bill prohibiting all rollbacks, either

price or wage, so that its recommendation could be brought clearly to the attention of the House Committee on Banking and Currency and, if not adopted by that Committee, could be offered as an amendment when the subject reaches the House floor. The Agriculture Committee's prohibition would amend Section 402(c) of the present law by adding the following:

"No existing ceiling shall be maintained and no new ceiling shall be placed into effect for any material or service at a level below the general level of prices for each grade, quality, or type of any such material or service prevailing therefor immediately preceding the issuance of the regulation or order first establishing a ceiling for such material or service. No wage, salary, or other compensation shall be stabilized at a level lower than that paid immediately preceding the issuance of the regulation or order first stabilizing such wage, salary, or other compensation."

West Coast Dedication

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ing, and other Dedication details. The letter follows:

Dedication of the new West Coast Building at Berkeley, Calif., October 11 and 12, is being planned now. Housing facilities are limited. The same situation prevailed at the Washington Building Dedication last year and it was found necessary to limit attendance to one representative per member firm, plus any who were there on official Association business. Obviously, the Association is unable to pay expenses of those attending the Dedication, except those who will be in Berkeley on official N.C.A. business.

The West Coast Dedication Committee wants to insure a memorable Dedication Event. They want as great attendance as possible within the limitations, but also desire to see that everyone in attendance is properly taken care of. The Committee is working now on programming, housing, entertainment and other details. To facilitate their work they are gathering advance information on potential attendance, so as to measure it against available facilities in San Francisco and Berkeley.

It is requested that you supply this information on the enclosed return postcard not later than July 1. This will be a real help to the Committee in drawing up the official invitation lists and in perfecting the many other complicated details that make for a successful Dedication. A later questionnaire covering housing and other matters will be sent to those indicating they plan to attend.

Your prompt return of the postcard will be greatly appreciated.

STATISTICS

Canned Fruit and Vegetable Stocks and Shipments

Reports on canners' stocks and shipments of canned apricots, sweet cherries, peaches, pears, corn, peas, tomatoes, and tomato juice have been compiled by the N.C.A. Division of Statistics, and detailed reports have been mailed to all canners packing these items.

Canned Corn Stocks and Shipments

	1949-50	1950-51
	(actual cases)	
Carryover, Aug. 1.....	4,112,712	6,466,680
Pack.....	33,138,318	21,645,243
Total supply.....	37,251,030	28,111,923
Stocks, June 1.....	10,077,688	1,388,060
Shipments during May.....	2,407,335	1,442,764
Shipments, Aug. 1 to June 1.....	37,173,342	26,723,863

Canned Pea Stocks and Shipments

	1949-50	1950-51
	(actual cases)	
Carryover, June 1.....	4,985,141	2,141,400
Pack.....	24,944,874	32,725,536
Total supply.....	29,930,015	34,866,936
Stocks, June 1.....	2,141,400	1,110,783
Shipments during May.....	1,128,679	1,187,617
Shipments, June 1 to June 1.....	27,788,615	33,756,153

Canned Tomato Stocks and Shipments

	1949-50	1950-51
	(actual cases)	
Carryover, July 1.....	3,718,555	1,968,427
Pack.....	18,873,672	18,724,350
Total supply.....	21,592,227	20,692,777
Stocks, June 1.....	2,599,692	142,194
Shipments during May.....	939,884	145,509
Shipments, July 1 to June 1.....	18,992,535	20,450,583

Tomato Juice Stocks and Shipments

	1949-50	1950-51
	(actual cases)	
Carryover, July 1.....	5,740,779	8,904,135
Pack.....	20,559,673	22,740,658
Total supply.....	26,300,452	31,644,793
Stocks, June 1.....	5,031,588	1,660,686
Shipments during May.....	1,803,634	1,381,623
Shipments, July 1 to June 1.....	21,268,864	24,084,107

Canned Apricot Stocks and Shipments

	1949-50	1950-51
	(cases—basis 24/2½" x)	
Carryover, June 1.....	1,522,000	840,000
Pack.....	2,375,000	5,661,000
Total supply.....	3,897,000	6,501,000
Stocks, June 1.....	540,000	115,000
Shipments during May.....	300,000	102,000
Shipments, June 1 to June 1.....	3,357,000	6,389,000

Sweet Cherry Stocks and Shipments

	1949-50	1950-51
	(cases—basis 24/2½" x)	
Carryover, June 1.....	65,000	316,000
Pack.....	1,678,000	741,000
Total supply.....	1,743,000	1,057,000
Stocks, June 1.....	316,000	55,000
Shipments during May.....	98,000	49,000
Shipments, June 1 to June 1.....	1,427,000	1,002,000

Canned Peach Stocks and Shipments

	1949-50	1950-51
	(cases—basis 24/2½" x)	
Carryover, June 1.....	3,515,000	2,542,000
Pack.....	19,134,000	16,605,000
Total supply.....	22,652,000	19,147,000
Stocks, June 1.....	2,542,000	625,000
Shipments during May.....	1,749,000	563,000
Shipments, June 1 to June 1.....	20,110,000	18,522,000

Canned Pear Stocks and Shipments

	1949-50	1950-51
	(cases—basis 24/2½" x)	
Carryover, June 1.....	788,000	597,000
Pack.....	5,904,000	6,370,000
Total supply.....	6,692,000	6,967,000
Stocks, June 1.....	597,000	605,000
Shipments during May.....	462,000	397,000
Shipments, June 1 to June 1.....	6,095,000	6,362,000

Canned Baby Food Stocks

Details of the canned baby food supply, stock and shipment situation are reported by the N.C.A. Division of Statistics as follows:

	1950	1951
	(thousands of dozens)	
Canner stocks, Jan. 1.....	55,341	62,453
Pack, Jan. through May.....	41,537	45,734
Supply.....	96,878	108,187
Canner Stocks, June 1.....	44,768	55,522
Canner Shipments, May.....	10,626	9,789
Canner shipments, Jan. through May.....	52,110	52,605

Revised Corn Standards Proposal

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tion objected have been retained in their original form.

To aid in a comparison of the two proposals, a brief summary of the points on which the new proposal differs from the tentative order of April 12, 1950, is provided below:

Proposed Standard of Identity

In its exceptions and brief filed in 1950, the N.C.A. voiced its objection to the requirement that the weight of the drained liquid in vacuum-pack whole-kernel corn be not in excess of 20 percent of the net weight of the contents of the can. The Association urged that the standard embody a level of not less than 23 percent. The present proposal retains 20 percent requirement (Section 51.20(c)(1)(i)).

The N.C.A. also took exception to the proposed requirement (Section 51.20(c)(1)(i)) that, with respect to vacuum-pack whole-kernel corn, a "substantial proportion of the air in the container" must be removed before sealing. It was felt that the vagueness of this requirement rendered it meaningless. The language of the present proposal requiring that

the container be closed "under conditions creating a high vacuum in the container" conceivably could be subject to the same objection.

Clarification of the status of two products, as urged by the Association, has been obtained in the present proposal. Finding 9 now expresses the intention of the Food and Drug Administration to treat canned corn on the cob, if production of that product is resumed, as a food for which no applicable standard exists. In addition, the revised identity standard for canned field corn (Section 51.30) now requires that mixtures of field corn and sweet corn in any proportions shall be labeled as "field corn."

Proposed Standards of Quality

In the exceptions and brief filed by the Association, the opinion was expressed that there was insufficient record evidence to support the April 12, 1950, proposal on discolored kernels. It was also pointed out that the concept of a "piece of kernel" was somewhat difficult to understand. This latter objection was equally valid in respect to the proposed tolerances for cob and husk, since the prescribed methods of measuring the quantity of foreign or defective units failed to include a proviso that only pieces of a certain minimum size should be counted. The revised proposal gives partial recognition to these objections by limiting the pieces of discolored kernel, cob or husk to be counted or measured by volume to those which remain on an 8-mesh sieve.

The industry also recommended a tolerance of 6" of silk (determined on pieces ½" or more in length) for each one ounce of net weight of cream-style corn. The present proposal continues the silk tolerance of 5" as contained in the first tentative order of April 12, 1950.

In its exceptions and brief, the N.C.A. further pointed out the lack of record evidence supporting the requirement (Section 51.21(3)(ii) of the proposed standards of quality) that the weight of the alcohol-insoluble solids of the washed drained material of cream style corn be not in excess of 27 percent. The requirement (Section 51.21(a)(2)(v)) that cream style corn with an AIS in excess of 20 percent have a consistency such that the average diameter of the approximately circular area over which the prescribed sample spreads does not exceed 10" was objected to on like grounds. The present proposal retains these tests for maturity and consistency in unchanged form.

STANDARDS

Text of Proposed FSA Standards for Canned Corn

Following is the full text of the findings of fact and definitions and standards of identity, quality, and fill of container proposed to be issued by the Federal Security Administrator and published in the *Federal Register* of June 20:

FEDERAL SECURITY AGENCY

Food and Drug Administration

(21 CFR, Parts 51, 52)

(Docket No. FDC-54)

CANNED CORN; DEFINITIONS AND STANDARDS OF IDENTITY, QUALITY, AND FILL OF CONTAINER

NOTICE OF PROPOSED RULE MAKING

In the matter of fixing and establishing definitions and standards of identity for canned corn and canned field corn; establishing a standard of quality for canned corn and standards of fill of container for canned corn and canned field corn:

There was published in the *Federal Register* on April 12, 1950 (15 F.R. 2060), a tentative order by the Federal Security Administrator which contained findings of fact and regulations proposing to amend the definitions and standards of identity for canned corn and canned field corn and to establish standards of quality and fill of container for canned corn. No final order has been promulgated in this matter. On consideration of the entire record to date, including the exceptions filed to the proposed order, and on the basis of substantial evidence received at the public hearing held pursuant to the notice published in the *Federal Register* on February 4, 1949 (14 F.R. 489), it is proposed that, by virtue of the authority vested in the Federal Security Administrator by the provisions of the Federal Food, Drug, and Cosmetic Act (sec. 401, 701; 52 Stat. 1046, 1055; 21 U.S.C. 341, 371), the following order be made:

Findings of fact.¹ 1. Canned corn is the food the principal component of which is the succulent kernels from husked, silked ears of sweet corn. The kernel consists of an outer hull (pericarp), the main inner portion (endosperm), the germ (embryo), and the tip cap. The tip cap portion of the kernel in usual preparation remains attached to the cob when the kernels are cut from it, and is not properly included in canned corn. There are five types of canned corn as described hereinafter in findings 3 through 6 and finding 8, and the

method of preparing the corn ingredient varies with the type of canned corn being prepared. Water is generally added for proper preparation and to aid in processing. Salt and sugar (sucrose) are generally added as seasoning ingredients. The salt and sugar are usually first dissolved in the water to form a solution, generally designated in the canning industry as a brine, which is then added to the corn ingredient. The food is sealed in a container, and is processed by heat to prevent spoilage. The evidence indicates the possibility of the development of other methods of processing, but no such methods have yet come into use. (R. 20, 22-23, 31, 34, 70-78, 281-285, 300, 308, 613-614, 707, 947-948; Ex. 1, OP 14, OP 20)

2. Red or green sweet peppers or mixtures of these are sometimes added to canned corn for seasoning or garnishing. There is no reason why red or green hot peppers could not be similarly used. The added peppers may be fresh, packed in brine, frozen, or canned or mixtures of these forms. The amount used varies, and generally is added without weighing. The labels of canned corn containing peppers customarily show the kind of peppers used. The consumer can be adequately informed by the statement "with — peppers," the blanks being filled in with the words "red" or "green" or both to show the color of the peppers used, and the words "sweet" or "hot" or both to show the type of peppers used. (R. 22, 34-35, 114-120, 122-123, 135-141, 142-149, 283, 288-289; Ex. 1, OP 14)

3. The corn ingredient of whole-kernel or whole-grain corn consists of kernels cut from the ear above the tip cap. In packing whole-kernel corn brine is added to aid in processing. In one style of pack enough brine is added to cover the corn ingredient. In another style of pack a considerably lower proportion of brine to the corn ingredient is used, and the containers are sealed under conditions creating a high vacuum in the container in order to prevent a change in the color of kernels not covered by brine. This latter type of pack has come to be known as vacuum pack or vacuum packed. These terms originated with the use of machines for obtaining a high vacuum in the containers by mechanical means. It is in the interest of consumers buying this type of corn to restrict the amount of brine used, because a lower ratio of brine to the total weight of the food in the container is the principal distinguishing characteristic of vacuum-pack whole-kernel corn. The weight of brine drained from the corn ingredient should not exceed 20 percent of

the net weight of the food in the container. (R. 21-23, 25, 27, 31, 37-38, 68-69, 73-74, 83, 130-131, 172-185, 186-228, 229-255, 284-287, 299, 303, 908-909, 1215-1217; Ex. 1, FDA 1, OP 10-12, OP 14)

4. The corn ingredient of fritter corn is prepared by slitting the kernels on the cob and scraping out the inner portion, or by scraping out the inner portion after cutting off and removing the top part of the kernel. The corn ingredient consists almost wholly of endosperm and germ. Brine is added to season the food and as an aid in processing. (R. 24-25, 74-77, 287-288, 551-552; Ex. 1, OP 14)

5. The corn ingredient of ground corn is obtained by grinding or comminuting corn kernels. Brine is added to season the food and as an aid to processing. This corn ingredient has not acquired a common name, but the designation "ground corn" adequately describes the product and differentiates it from other corn ingredients. (R. 24-25, 40, 287-288, 529; Ex. 1, OP 14)

6. The corn ingredient of cream-style corn consists of cut kernels, together with portions of kernels that have been scraped from the ear, or a mixture of cut kernels and ground corn or fritter corn or both. Brine is generally added, and the mixture is often given a preliminary heat treatment. A small amount of starch is sometimes added to secure a smooth product, particularly where the corn ingredient is quite immature. There is a possibility that the use of starch may be abused, in that by its use water in excess of that necessary for proper preparation and processing can be incorporated in the product. The evidence, however, does not furnish a basis for setting a numerical maximum limit on the water used. Consistency of cream-style corn, fritter corn, and ground corn was proposed as a factor of identity for the purpose of limiting the amount of water used; however, the consistency of canned corn is affected by other factors than the amount of water used, and is a factor of quality rather than identity. Whenever starch has been used, the label has customarily borne a statement to reveal the addition. Cream-style corn has at times been designated as "crushed corn." In recent years, however, this term has been gradually discontinued as a designation for this style of pack. (R. 24-26, 30, 34, 39-46, 59-60, 77-81, 85-88, 259-276, 279, 295, 307-308, 554-556, 564, 856-857, 861, 905-907, 947-948, 1000-1001; Ex. 1, 2, OP 2, OP 4, OP 14)

7. The material retained on an 8-mesh sieve when cream-style corn is mixed with water and passed over such a sieve is referred to as washed drained residue. There was considerable evidence indicating that some definite proportion of washed drained residue should be required

¹ The citations following each finding of fact refer to the pages of the transcript of testimony and the exhibits received in evidence at the hearing.

in cream-style corn, or that cream-style corn containing less than a certain amount of washed drained residue should be designated as substandard in quality. Because of the wide variations in the amounts of washed drained residue found in cream-style corn and the divergent opinions expressed as to the significance of washed drained residue, it is inadvisable to prescribe a limit for washed drained residue, either as an identity factor or as a quality factor. (R. 87-88, 90-94, 105, 319, 323, 397-433, 483-497, 529, 534-536, 543-554, 565-569, 575-583, 588-595, 624-652, 681-682, 698-706, 718, 762-763, 768-773, 800-829, 839-856, 866-906, 918-940, 943-956, 966-968, 998-1000; Ex. 1, FDA 5-7, FDA 14A, FDA 14B, FDA 15-16, OP 4, OP 16-18, OP 20, OP 24, OP 25A, OP 25B, OP 26-27)

8. A relatively small amount of a type of canned corn resembling whole-kernel corn, except that the kernels are dried before canning, is packed. In the usual method of preparation the shucked, silked ears of succulent sweet corn are cooked; the kernels are cut from the cob and are partially dehydrated in a blast of hot air. The dried kernels are placed in containers with brine, and the containers are sealed and processed. This type of canned corn is commonly known as evaporated corn. The drying of the kernels results in the corn ingredient having a taste and appearance that distinguish it from whole-kernel corn as described in finding 3. (R. 23-24, 36-37, 158-167, 303-306; Ex. OP 8-9)

9. Under 21 CFR 52.990 provision was made for canned corn on the cob. Manufacture of this product was discontinued during the late war, and the record does not show that it has been resumed. The evidence of record does not furnish a basis for including this form of corn in the definition and standard of identity, standard of quality, or standard of fill of container for canned corn. Canned corn on the cob, if its production is resumed, can best be treated as a food for which no applicable standard exists. (R. 22, 36; Ex. 2)

10. Kernels of yellow sweet corn and white sweet corn are occasionally mixed in preparing canned corn. Due to cross-pollination, canned yellow corn may occasionally contain a few kernels of white corn, and canned white corn may contain a few kernels of yellow corn. The record does not show that any minimum limit for yellow corn in white corn (or vice versa) is needed. Intentional admixtures should be permitted under proper labels. (R. 26-27, 281-282, 1233-1237, 1241-1244; Ex. 1, OP 14)

11. Field corn has not generally been considered suitable for canning because it is not as sweet and not as tender as sweet corn. Field corn is more starchy than sweet corn. Notwithstanding its less palatable characteristics, it is canned to a limited extent, either alone or mixed with

sweet corn. In mixtures of field corn and sweet corn the latter has been used in proportions of from 20 to 40 percent to improve the appearance and flavor. Although it is generally packed only in the cream-style form, there is no reason why it could not be packed in all the forms previously described in findings 3 through 6 and finding 8. It is in the interest of consumers that a standard be adopted so that if field corn is used the finished food can be definitely differentiated by the consumer from canned sweet corn. To accomplish this it is reasonable to require that the food prepared from field corn or any mixture of field corn with sweet corn bear on the label the name "field corn." (R. 20, 149-158; Ex. 2, OP 6-7)

12. The common or usual name of canned corn includes the generic name "corn," "sweet corn," or "sugar corn"; a designation of the color group of the corn, or mixture of color groups used; the words "whole kernel" or "whole grain" when the corn ingredient is that described in finding 3, together with the supplemental statement "vacuum pack" or "vacuum packed," when the conditions characterizing vacuum-pack corn outlined in finding 3 are met; the word "fritter" when the corn ingredient described in finding 4 is used; the word "ground" when the corn ingredient described in finding 5 is used; the words "cream style" when the corn ingredient described in finding 6 is used; and the word "evaporated" when the corn ingredient described in finding 8 is used. Many canners wish to use the varietal name of the corn as a part of the name of the canned food. Consumers are sometimes interested in knowing the variety of corn used, and it is in the interest of consumers to provide for a variety designation in the name. The arrangement of the different parts of the name of canned corn varies according to the preference of the packer, and it is reasonable to provide that the different parts of the name be arranged in any order not misleading to the consumer. The same facts apply to the name of field corn, except the words "corn," "sweet corn," and "sugar corn" are replaced by the words "field corn," and the term "golden field corn" is not used. (R. 20, 27, 38, 40, 98-101, 152-153, 163, 287-288, 291, 425, 551-552, 861; Ex. 1, OP 2, OP 6-9, OP 14)

13. The appearance of canned corn is marred by the presence of black or brown discolored kernels or pieces of kernels. Any unit that has upon it a brown or black discolored area is objectionable. For the purpose of a quality standard it is reasonable that only those discolored kernels or pieces of kernels of such size that they remain on an 8-mesh sieve be counted. The presence of more than one such brown or black discolored kernel or piece of kernel in each 2 ounces of drained weight of whole-kernel or

evaporated corn, or more than one such brown or black discolored kernel or piece of kernel in each 2 ounces of net weight of fritter, ground, or cream-style corn so lowers the quality of the food that its label should bear a statement of substandard quality. The caramelized color imparted to canned corn in the processing of the evaporated product is not a brown or black discoloration. (R. 23, 314, 439-440, 499-500, 750-751; Ex. FDA 2-7, OP 18)

14. The eating quality of canned corn is adversely affected by the presence of pieces of cob. Cob is inedible, and even a small piece is objectionable. For the purpose of a quality standard it is reasonable that only those pieces of cob of such size that they remain on an 8-mesh sieve be included in the measurement of cob. A practicable method for measuring the amount of such cob is to segregate it and measure its volume by displacement. The presence of more than 1 cubic centimeter of cob remaining on an 8-mesh sieve in each 14 ounces of drained weight of whole-kernel or evaporated corn or in each 20 ounces of net weight of fritter, ground, or cream style corn so lowers the quality of the food that its label should bear a statement of substandard quality. (R. 315, 321, 323, 447-453, 540-531, 612; Ex. FDA 2-7, OP 18)

15. The appearance and also the eating quality of canned corn are adversely affected by the presence of husk. For the purpose of a quality standard it is reasonable that only those pieces of husk of such size that they remain on an 8-mesh sieve be included in the measurement of husk. A practicable method for measuring the amount of such husk is to segregate the pieces and aggregate their areas. The presence of pieces of husk of such size that they remain on an 8-mesh sieve, and in such an amount as to aggregate more than 1 square inch in each 14 ounces of drained material of whole-kernel or evaporated corn, or in each 20 ounces of net weight of fritter, ground, or cream-style corn, so lowers the quality of the food that its label should bear a statement of substandard quality. (R. 316, 321, 323, 454A-459, 598, 652; Ex. FDA 2-7, OP 18)

16. The appearance and also the eating quality of canned corn are adversely affected by the presence of silk. Silk is unsightly and unpleasant to the taste. There are two different color groups of silk: light green or white, and dark brown. These two color groups are equally objectionable when eaten, but dark-brown silk is more unsightly than lighter colored silk. It is impracticable to distinguish between colors when measuring the amount of silk present. Large pieces of silk are more objectionable to the consumer than small ones, and when the length of a piece is less than $\frac{1}{4}$ inch it ceases to be a significant quality factor. For this reason, when the

amount of silk present is measured, pieces less than $\frac{1}{2}$ inch in length should not be counted. A practicable method for measuring the amount of silk is to segregate the pieces $\frac{1}{2}$ -inch long or longer remaining on the 8-mesh sieve and determine the aggregate length. The presence of a total length of more than 7 inches of silk for each 1 ounce of drained material of whole-kernel or evaporated corn, or more than a total length of 5 inches of silk in each 1 ounce of net weight of fritter, ground, or cream-style corn so lowers the quality of the food that its label should bear a statement of substandard quality. (R. 316-318, 321, 323, 425, 531-534, 598-599, 771-771A, 989-994; Ex. FDA 2-7, OP 18)

17. In cream-style corn consistency has long been known as a factor of quality. Thinness and wateriness detract from the quality of cream-style corn. Thinness and wateriness may be due to the use of too much water, the use of very young corn, or both. When a thin consistency is due to the use of very young corn, the cream-style corn is acceptable to some buyers despite its relatively thin consistency. When such very young corn is used, the alcohol-insoluble-solids content of the washed drained material, as measured by the method set forth in finding 21, will be less than 20 percent. For many years it has been the practice in the trade dealing in canned corn to judge its consistency by observing its spread when emptied from the container onto a flat surface or by spooning the product, but these methods lack the precision which is necessary in a standard of quality. In the trade more accurate methods, which utilize instruments known as consistometers, have been developed for measuring consistency. The method set forth in finding 21 is practicable, well known, and sufficiently precise for use in a standard of quality. When the consistency of cream-style corn is tested by this method and the sample spreads over an approximately circular area having an average diameter of more than 10 inches in the case of cream-style corn the washed drained material of which has an alcohol-insoluble-solids content of over 20 percent, or spreads over more than 12 inches in the case of cream-style corn the washed drained material of which has an alcohol-insoluble-solids content of 20 percent or less, the quality of the cream-style corn is below standard, and its label should bear a statement of substandard quality. Thinness and wateriness also detract from the quality of fritter corn and ground corn. It is reasonable to determine the consistency of fritter corn and ground corn by the method used for determining consistency of cream-style corn. When the consistency of fritter corn or ground corn is tested by this method and the sample spreads over an approximately circular area having an

average diameter of more than 12 inches, its quality is below standard, and its label should bear a statement of substandard quality. (R. 25-26, 34, 59-61, 85, 260-273, 289-292, 319, 322-323, 387-388, 503-507, 556-557, 560-561, 564-565, 709, 853-854, 889, 1000-1001; Ex. 1, FDA 5-7, OP 4, OP 13, OP 18)

18. The eating quality of canned corn is affected by the maturity of the corn used. As corn grows more mature the flavor changes and the corn becomes tough and hard. Accompanying these changes there is an increase in the alcohol-insoluble-solids content of the kernels. Alcohol-insoluble solids comprise certain substances, mostly starch, which are insoluble in warm 80-percent ethyl alcohol. Evidence relating to the determination of alcohol-insoluble solids was confined to the cream-style and whole-kernel corn ingredients. When the percent of alcohol-insoluble solids as determined according to the method set forth in finding 21 for cream-style corn or whole-kernel corn exceeds 27, the product is of such low quality that its label should bear a statement of substandard quality. (R. 32-33, 60, 122-123, 318, 354-356, 433-439, 465-473, 516-517, 561, 611-612, 661, 736-737, 748-750, 760, 762-764, 969-980, 986-987, 996, 1102; Ex. 1, FDA 2-8, OP 28-29)

19. The eating quality of canned corn is adversely affected by the presence of pulled kernels. A pulled kernel is a kernel, or portion of kernel, from which not all of the tip cap has been removed. The tip cap of the kernel is composed of a hard, fibrous material that is unpleasant to chew. All the samples on which pulled kernels were reported showed relatively small numbers of such kernels, and on the basis of the evidence it is difficult to fix a reasonable dividing line between canned corn of standard quality and canned corn that is substandard in quality because of this defect. It is inadvisable at present to include a limit on pulled kernels in a quality standard for canned corn. (R. 314-315, 321-323, 440-447, 454, 500-501, 507-516, 534-535, 596, 738-740, 767-768; Ex. FDA 2-7, OP 18)

20. The determination of the proportionate amounts of black or brown discolored kernels, cob, husk, and silk present in whole-kernel and evaporated corn should be based upon the drained weight of the corn, in order to allow for different proportions of brine, but in fritter, ground, and cream-style corn, where it is impracticable to separate the corn ingredient from the packing medium, such proportionate amounts should be based upon the net weight of the contents of the container. (R. 317-318, 320-324; Ex. FDA 2-7)

21. A practicable method for determining whether canned corn is of substandard quality is as follows:

A. In the case of whole-kernel corn and evaporated corn. Determine the

gross weight of the container. Open and distribute the contents of the container over the meshes of an 8-mesh circular sieve which has previously been weighed. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. The bottom of the sieve is woven-wire cloth which complies with the specifications for such cloth set forth under "2380 Micron (No. 8)" in Table I of "Standard Specifications for Sieves," published March 1, 1940, in L. C. 584 of the U. S. Department of Commerce, National Bureau of Standards. Without shifting the material on the sieve, so incline the sieve as to facilitate drainage. Two minutes from the time drainage begins, weigh the sieve and the drained material. Record, in ounces, the weight so found, less the weight of the sieve, as the drained weight. Dry and weigh the empty container and subtract this weight from the gross weight to obtain the net weight. Calculate the percent of drained liquid in the net weight.

Pour the drained material from the sieve into a flat tray and spread it in a layer of fairly uniform thickness. Count, but do not remove, the brown or black discolored kernels or pieces of kernel and calculate the number per 2 ounces of drained material. Remove pieces of silk more than $\frac{1}{2}$ -inch long, husk, cob, and any pieces of material other than corn. Measure the aggregate length of such pieces of silk and calculate the length of silk per 1 ounce of drained weight. Spread the husk flat, measure its aggregate area, and calculate the area of husk per 14 ounces of drained weight. Place all pieces of cob under a measured amount of water in a cylinder which is so graduated that the volume can be measured to 0.1 cubic centimeter. Take the increase in volume as the aggregate volume of the cob and calculate the volume of cob per 14 ounces of drained weight.

If the corn is whole kernel, comminute a representative 100-gram sample of the drained corn from which the silk, husk, cob, and other material which is not corn (i.e., peppers) have been removed. An equal amount of water is used to facilitate this operation. Weigh to the nearest 0.01 gram a portion of the comminuted material equivalent to approximately 10 grams of the drained corn into a 600-cubic centimeter beaker. Add 300 cubic centimeters of 80-percent alcohol (by volume), stir, cover beaker, and bring to a boil. Simmer slowly for 30 minutes. Fit a Buchner funnel with a previously prepared filter paper of such size that its edges extend $\frac{1}{2}$ inch or more up the vertical sides of the funnel. The previous preparation of the filter paper consists of drying it in a flat-bottomed dish for 2 hours at 100° C., covering the dish with a tight-fitting cover, cooling it in a desiccator, and promptly weighing to

the nearest 0.001 gram. After the filter paper is fitted to the funnel, apply suction and transfer the contents of the beaker to the funnel. Do not allow any of the material to run over the edge of the paper. Wash the material on the filter with 80-percent alcohol (by volume) until the washings are clear and colorless. Transfer the filter paper with the material retained thereon to the dish used in preparing the filter paper. Dry the material in a ventilated oven, without covering the dish, for 2 hours at 100° C. Place the cover on the dish, cool it in a desiccator, and promptly weigh to the nearest 0.001 gram. From this weight subtract the weight of the dish, cover, and paper as previously found. Calculate the remainder to percentage.

B. In the case of fritter corn, ground corn, and cream-style corn. Allow the container to stand at least 24 hours at a temperature of 68° F. to 85° F. Determine the gross weight, open, transfer the contents into a pan, and mix thoroughly in such a manner as not to incorporate air bubbles. (If the net contents of a single container is less than 18 ounces, determine the gross weight, open, and mix the contents of the least number of containers necessary to obtain 18 ounces.) Fill level full a hollow, truncated cone so placed on a polished horizontal plate as to prevent leakage. The cone has an inside bottom diameter of 3 inches, inside top diameter of 2 inches, and height of $4\frac{2}{3}$ inches. As soon as the cone is filled, lift it vertically. Determine the average of the longest and shortest diameters of the approximately circular area on the plate covered by the sample 30 seconds after lifting the cone. Dry and weigh each empty container and subtract the weight so found from the gross weight to obtain the net weight.

Transfer the material from the plate, cone, and pan onto an 8-mesh sieve as prescribed in the first paragraph of part A. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. Set the sieve in a pan. Add enough water to bring the level within $\frac{1}{4}$ inch to $\frac{1}{2}$ inch of the top of the sieve. Gently wash the material on the sieve by combined up-and-down and circular motion for 30 seconds. Repeat washing with a second portion of water. Remove sieve from pan, incline to facilitate drainage, and drain for 2 minutes.

From the material remaining on the 8-mesh sieve, count, but do not remove, the brown or black discolored kernels or pieces of kernel and calculate the number per 2 ounces of net weight. Remove pieces of silk more than $\frac{1}{2}$ -inch long, husk, cob, and other material which is not corn (i. e., peppers). Measure aggregate length

of such pieces of silk and calculate the length per ounce of net weight. Spread the husk flat and measure its aggregate area and calculate the area per 20 ounces of net weight. Place all pieces of cob under a measured amount of water in a cylinder which is so graduated that the volume may be measured to 0.1 cubic centimeter. Take the increase in volume as the aggregate volume of the cob and calculate the volume of cob per 20 ounces of net weight. If the corn is cream-style corn, take a representative 100-gram sample of the material remaining on the 8-mesh sieve (if such material weighs less than 100 grams take all of it) and determine the alcohol-insoluble solids as prescribed above for whole-kernel corn. (R. 26, 49-58, 320-324, 354-355, 435-438, 449, 455-457, 468-470, 506, 529, 530, 561, 612, 709, 746-749, 889, 989-990; Ex. 1, FDA 1-8)

22. When canned corn falls below the standard of quality, a label statement that fairly and accurately informs the consumer of that fact is the general statement of substandard quality specified in 21 CFR 10.2 (a). A more specific and equally acceptable statement may be obtained by substituting for the second line, "Good Food—Not High Grade," the words specified after the corresponding number of one of the findings 13 through 17, when the quality factor described in the finding is the only one which such corn fails to meet, as follows:

- a. "Excessive discolored kernels." (Finding 13)
- b. "Excessive cob." (Finding 14)
- c. "Excessive husk." (Finding 15)
- d. "Excessive silk." (Finding 16)
- e. "Excessive liquid." (Finding 17) (R. 314-316, 324-325, 473-474; Ex. 1, 2)

23. A reasonable requirement for the fill of container for fritter corn, ground corn, and cream-style corn is a requirement that these foods occupy not less than 90 percent of the total capacity of the container as determined by the general method of fill of container in 21 CFR 10.1 (b). This requirement can be readily met in general practice by canners of fritter corn, ground corn, and cream-style corn. This method of measuring fill is a simple and practicable one, and provides accurate measurement for all shapes of containers. A small proportion of the corn canned in these styles is packed in large-size containers, commonly known as number 10 cans, for restaurant and institutional use. Some care is necessary to remove entrapped air from these large containers to obtain a 90-percent fill. It is reasonable to require that this care be taken, and that the same fill of container requirement be established for all commercial-size containers. When canned corn falls below the standard of fill of container, the consumer should be so informed.

A label statement which fairly and accurately informs the consumer of that fact is the general statement of substandard fill of container (21 CFR 10.2 (b)). (R. 1085-1086, 1087, 1088, 1164-1165; Ex. 1, 2)

24. In the case of whole-kernel and evaporated corn, a requirement based on the total volume occupied by the corn and the packing medium would not be satisfactory, since water added to aid in processing occupies a large proportion of the volume of the container.

Evidence was received tending to show that a requirement fixing a minimum drained weight of corn in relation to the capacity of the container would be a reasonable and effective method of establishing a standard of fill for whole-kernel corn. This evidence, however, showed the need for differentiating between corns of different maturities when fixing minimum drained-weight requirements, but did not furnish an adequate basis for making separate requirements. It is therefore inadvisable on the basis of the evidence now available to include in this order a standard of fill of container for whole-kernel and evaporated corn. (R. 1018-1146, 1146-1166, 1167-1169, 1171-1184; Ex. 1, FDA 17-30, OP 30-33)

25. Although there is no evidence in the record on fill of container for canned field corn specifically, the similarity of canned field corn to canned corn is such that it is reasonable to make the same requirements for fill of container and label statement of substandard fill for canned fritter field corn, ground field corn, and cream-style field corn as for the same types of canned sweet corn. (R. 149-158; Ex. OP 6-7)

Conclusions. Upon consideration of the whole record and the foregoing findings of fact it is concluded that it will promote honesty and fair dealing in the interest of consumers:

1. To amend the regulations fixing and establishing definitions and standards of identity for canned vegetables other than those specifically regulated (21 CFR 52.990) by deleting therefrom all references to corn and field corn.

2. To fix and establish the specific definitions and standards of identity for canned corn and canned field corn as hereinafter set forth.

3. To fix and establish a standard of quality for canned corn as hereinafter set forth, consideration having been given to and due allowance made for the different characteristics of the several varieties of corn.

4. To fix and establish standards of fill of container for fritter, ground, and cream-style corn and for fritter, ground, and cream-style field corn as hereinafter set forth.

It is further concluded that the record does not furnish a satisfactory basis for establishing standards of

fill of container for whole-kernel corn and evaporated corn.

1. Therefore, it is proposed to amend Part 51—Canned Vegetables; Definitions and Standards of Identity; Quality; and Fill of Container by adding the following new sections:

§ 51.20 *Canned corn, canned sweet corn, canned sugar corn; identity; label statement of optional ingredients.*

(a) Canned corn, canned sweet corn, canned sugar corn is the food consisting of one of the corn ingredients specified in paragraph (b) of this section, with water necessary for proper preparation and processing. It may be seasoned or garnished with one or more of the following optional ingredients:

(1) Salt.

(2) Sugar (sucrose).

(3) Pieces of sweet red peppers or sweet green peppers or hot red peppers or hot green peppers or a mixture of any two or more of these.

It is sealed in a container and so processed by heat as to prevent spoilage.

(b) The corn ingredients referred to in paragraph (a) of this section consist of succulent sweet corn of the white or yellow color groups, or mixtures of these, and are as follows:

(1) Cut kernels from which the hulls have not been separated.

(2) Pieces of the inner portion of the corn kernel substantially free from hull.

(3) Ground kernels from which the hulls have not been separated.

(4) A mixture of the form described in subparagraph (1) of this paragraph with one or both of the forms described in subparagraphs (2) and (3) of this paragraph. When necessary to insure smoothness, starch may be added, in a quantity not more than sufficient for that purpose.

(5) Cut and cooked kernels from which most of the moisture has been evaporated.

In preparing each of the foregoing corn ingredients, the tip caps are removed.

(c) (1) The name of the food is: "Corn" or "Sweet Corn" or "Sugar Corn" with the name of the color group used, "White," "Yellow," or "Golden," or with the names of the color groups used, "White and Yellow" or "White and Golden," when the white color group predominates, and "Yellow and White" or "Golden and White," when the yellow color group predominates, and with:

(i) The words "Whole Kernel" or "Whole Grain," when the corn ingredient specified in paragraph (b) (1) of this section is used. When the weight of the liquid in the container, as determined by the method prescribed in § 51.21 (b) (1), is not more than 20 percent of the net weight, and the container is closed under conditions creating a high vacuum in the

container, the words "Vacuum Pack" or "Vacuum Packed" also are part of the name.

(ii) The word "Fritter," when the corn ingredient specified in paragraph (b) (2) of this section is used.

(iii) The word "Ground," when the corn ingredient specified in paragraph (b) (3) of this section is used.

(iv) The words "Cream Style," when the corn ingredient specified in paragraph (b) (4) of this section is used.

(v) The word "Evaporated," when the corn ingredient specified in paragraph (b) (5) of this section is used.

(2) The parts of the name as specified in subparagraph (1) of this paragraph may be arranged in any order of precedence. The varietal name of the corn used may intervene between parts of the name of the food. For the purpose of arrangement of the name, the words "Sweet" and "Corn" may be treated as separate parts of the name. When the varietal name immediately precedes or follows the name or intervenes between parts of the name of the food and it accurately designates the color of the corn ingredient, no other designation of the color group need be made.

(d) (1) When the optional seasoning or garnishing ingredient specified in paragraph (a) (3) of this section is used, the label shall bear the words "With _____ peppers," the blanks being filled in with the words "red" or "green" or both, to show the color of peppers used, and "sweet" or "hot" or both, to show the kind of peppers used, as for example "With green sweet peppers" or "With hot red peppers."

(2) When the optional starch ingredient specified in paragraph (b) (4) of this section is used, the label shall bear the statement "Starch added to insure smoothness."

(e) Wherever the name of the food appears on the label so conspicuously as to be easily seen under customary conditions of purchase, the words and statements prescribed by paragraph (d) of this section shall immediately and conspicuously precede or follow such name, without intervening written, printed, or graphic matter, except that the varietal name of the corn used may so intervene.

§ 51.21 *Canned corn, canned sweet corn, canned sugar corn; quality; label statement of substandard quality.*
(a) The standard of quality for canned corn is as follows:

1. When tested by the method prescribed in paragraph (b) of this section, canned corn in which the corn ingredient is whole-kernel corn (§ 51.20 (b) (1)) or evaporated corn (§ 51.20 (b) (5)):

(i) Contains not more than one brown or black discolored kernel or piece of kernel for each 2 ounces of drained weight;

•(ii) Contains not more than 1 cubic centimeter of pieces of cob for each 14 ounces of drained weight;

(iii) Contains not more than 1 square inch of husk for each 14 ounces of drained weight; and

(iv) Contains not more than 7 inches of silk for each 1 ounce of drained weight.

(2) When tested by the method prescribed in paragraph (c) of this section, canned corn in which the corn ingredient is fritter corn (§ 51.20 (b) (2)), ground corn (§ 51.20 (b) (3)), or cream-style corn (§ 51.20 (b) (4)):

(i) Contains not more than one brown or black discolored kernel or piece of kernel for each 2 ounces of net weight;

(ii) Contains not more than 1 cubic centimeter of pieces of cob for each 20 ounces of net weight;

(iii) Contains not more than 1 square inch of husk for each 20 ounces of net weight;

(iv) Contains not more than 5 inches of silk for each 1 ounce of net weight; and

(v) Has a consistency such that the average diameter of the approximately circular area over which the prescribed sample spreads does not exceed 12 inches, except that, in the case of cream-style corn the washed drained material of which contains more than 20 percent of alcohol-insoluble solids, the average diameter of the approximately circular area over which the prescribed sample spreads does not exceed 10 inches.

(3) (i) The weight of the alcohol-insoluble solids of whole kernel corn (§ 51.20 (b) (1)) does not exceed 27 percent of the drained weight, when tested by the method prescribed in paragraph (b) of this section.

(ii) The weight of the alcohol-insoluble solids of the washed drained material of cream-style corn (§ 51.20 (b) (4)) does not exceed 27 percent of the weight of such material, when tested by the method prescribed in paragraph (c) of this section.

(b) The method referred to in paragraph (a) of this section for testing whole-kernel corn (§ 51.20 (b) (1)) and evaporated corn (§ 51.20 (b) (5)) is as follows:

(1) Determine the gross weight of the container. Open and distribute the contents of the container over the meshes of an 8-mesh circular sieve which has previously been weighed. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. The bottom of the sieve is woven-wire cloth which complies with the specifications for such cloth set forth under "2380 Micon (No. 8)" in Table I of "Standard Specifications for Sieves," published March 1, 1940, in L. C. 584 of the U. S. Department of Commerce, National Bureau of

Standards. Without shifting the material on the sieve, so incline the sieve as to facilitate drainage. Two minutes from the time drainage begins, weigh the sieve and the drained material. Record, in ounces, the weight so found, less the weight of the sieve, as the drained weight. Dry and weigh the empty container and subtract this weight from the gross weight to obtain the net weight. Calculate the percent of drained liquid in the net weight.

(2) Pour the drained material from the sieve into a flat tray and spread it in a layer of fairly uniform thickness. Count, but do not remove, the brown or black discolored kernels or pieces of kernel and calculate the number per 2 ounces of drained material. Remove pieces of silk more than $\frac{1}{2}$ -inch long, husk, cob, and any pieces of material other than corn. Measure the aggregate length of such pieces of silk and calculate the length of silk per 1 ounce of drained weight. Spread the husk flat, measure its aggregate area, and calculate the area of husk per 14 ounces of drained weight. Place all pieces of cob under a measured amount of water in a cylinder which is so graduated that the volume can be measured to 0.1 cubic centimeter. Take the increase in volume as the aggregate volume of the cob and calculate the volume of cob per 14 ounces of drained weight.

(3) If the corn is whole kernel (§ 51.20 (b) (1)), comminute a representative 100-gram sample of the drained corn from which the silk, husk, cob, and other material which is not corn (i.e., peppers) have been removed. An equal amount of water is used to facilitate this operation. Weigh to nearest 0.01 gram a portion of the comminuted material equivalent to approximately 10 grams of the drained corn into a 600-cubic centimeter beaker. Add 300 cubic centimeters of 80-percent alcohol (by volume), stir, cover beaker, and bring to a boil. Simmer slowly for 30 minutes. Fit a Buchner funnel with a previously prepared filter paper of such size that its edges extend $\frac{1}{2}$ inch or more up the vertical sides of the funnel. The previous preparation of the filter paper consists of drying it in a flat-bottomed dish for 2 hours at 100° C., covering the dish with a tight-fitting cover, cooling it in a desiccator, and promptly weighing to the nearest 0.001 gram. After the filter paper is fitted to the funnel, apply suction and transfer the contents of the beaker to the funnel. Do not allow any of the material to run over the edge of the paper. Wash the material on the filter with 80-percent alcohol (by volume) until the washings are clear and colorless. Transfer the filter paper with the material retained thereon to the dish used in preparing the filter paper. Dry the material in a ventilated oven, without covering the dish, for 2 hours at 100° C. Place the cover on the dish,

cool it in a desiccator, and promptly weigh to the nearest 0.001 gram. From this weight subtract the weight of the dish, cover, and paper as previously found. Calculate the remainder to percentage.

(c) The method referred to in paragraph (a) of this section for testing fritter corn (§ 51.20 (b) (2)), ground corn (§ 51.20 (b) (3)), and cream-style corn (§ 51.20 (b) (4)) is as follows:

(1) Allow the container to stand at least 24 hours at a temperature of 68° F. to 85° F. Determine the gross weight, open, transfer the contents into a pan, and mix thoroughly in such a manner as not to incorporate air bubbles. (If the net contents of a single container is less than 18 ounces, determine the gross weight, open, and mix the contents of the least number of containers necessary to obtain 18 ounces.) Fill level full a hollow, truncated cone so placed on a polished horizontal plate as to prevent leakage. The cone has an inside bottom diameter of 3 inches, inside top diameter of 2 inches, and height of $4\frac{2}{3}$ inches. As soon as the cone is filled, lift it vertically. Determine the average of the longest and shortest diameters of the approximately circular area on the plate covered by the sample 30 seconds after lifting the cone. Dry and weigh each empty container and subtract the weight so found from the gross weight to obtain the net weight.

(2) Transfer the material from the plate, cone, and pan onto an 8-mesh sieve as prescribed in paragraph (b) (1) of this section. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. Set the sieve in a pan. Add enough water to bring the level within $\frac{1}{2}$ inch to $\frac{3}{4}$ inch of the top of the sieve. Gently wash the material on the sieve by combined up-and-down and circular motion for 30 seconds. Repeat washing with a second portion of water. Remove sieve from pan, incline to facilitate drainage, and drain for 2 minutes.

(3) From the material remaining on the 8-mesh sieve, count, but do not remove, the brown or black discolored kernels or pieces of kernel and calculate the number per 2 ounces of net weight. Remove pieces of silk more than $\frac{1}{2}$ -inch long, husk, cob, and other material which is not corn (i.e., peppers). Measure aggregate length of such pieces of silk and calculate the length per ounce of net weight. Spread the husk flat and measure its aggregate area and calculate the area per 20 ounces of net weight. Place all pieces of cob under a measured amount of water in a cylinder which is so graduated that the volume may be measured to 0.1 cubic centimeter. Take the increase in volume as the aggregate volume of the cob and cal-

culate the volume of cob per 20 ounces of net weight. If the corn is cream-style corn (§ 51.20 (b) (4)), take a representative 100-gram sample of the material remaining on the 8-mesh sieve (if such material weighs less than 100 grams take all of it) and determine the alcohol-insoluble solids as prescribed in paragraph (b) (3) of this section for whole-kernel corn.

(d) If the quality of canned corn falls below the standard prescribed in paragraph (a) of this section, the label shall bear the general statement of substandard quality specified in § 10.2 (a) of this chapter, in the manner and form therein specified; however, if the quality of the canned corn falls below standard with respect to only one of the factors of quality specified by subdivisions (i) to (iv) of paragraph (a) (1) of this section, or by subdivisions (i) to (v) of paragraph (a) (2) of this section, there may be substituted for the second line of such general statement of substandard quality, "Good Food—Not High Grade," a new line as specified after the corresponding subdivision designation of paragraph (a) of this section which the canned corn fails to meet:

(1) (i) or (2) (i)—"Excessive discolored kernels."

(1) (ii) or (2) (ii)—"Excessive cob."

(1) (iii) or (2) (iii)—"Excessive husk."

(1) (iv) or (2) (iv)—"Excessive silk."

(2) (v)—"Excessively liquid."

§ 51.22 Canned corn, canned sweet corn, canned sugar corn where the corn ingredient is in one of the forms known as fritter corn, ground corn, or cream-style corn; fill of container; label statement of substandard fill.

(a) The standard of fill of container for canned corn where the corn ingredient is in one of the forms known as fritter corn (§ 51.20 (b) (2)), ground corn (§ 51.20 (b) (3)), or cream-style corn (§ 51.20 (b) (4)) is a fill of not less than 90 percent of the total capacity of the container, as determined by the general method for fill of containers prescribed in § 10.1 (b) of this chapter.

(b) If canned fritter corn, canned ground corn, or canned cream-style corn falls below the standard of fill of container prescribed in paragraph (a) of this section, the label shall bear the general statement of substandard fill specified in § 10.2 (b) of this chapter, in the manner and form therein specified.

§ 51.30 Canned field corn; identity; label statement of optional ingredients. (a) Canned field corn conforms to the definition and standard of identity, and is subject to the requirements for label statement of optional ingredients, prescribed for canned

corn by § 51.20, except that the corn ingredient consists of succulent field corn or a mixture of succulent field corn and succulent sweet corn.

(b) The name of the food conforms to the name specified in § 51.20 (c), except that the words "Corn," "Sweet Corn," and "Sugar Corn" are replaced by the words "Field Corn," and the term "Golden Field Corn" is not used.

§ 51.32 Canned field corn where the corn ingredient is in one of the forms known as fritter field corn, ground field corn, or cream-style field corn; fill of container; label statement of substandard fill. Each of the foods canned fritter field corn, canned ground field corn, and canned cream-style field corn conforms to the standard of fill of container and label statement of substandard fill prescribed for canned fritter corn, canned ground corn, and canned cream-style corn by § 51.22 (a) and (b).

2. It is also proposed to amend Part 52—Canned Vegetables Other Than Those Specifically Regulated; Definitions and Standards of Identity in the following respects:

a. In § 52.990 Canned vegetables; identity; label statement of optional ingredients, paragraph (b), delete from the table in column I the ten listed references to canned corn, beginning with the words "White sweet corn or" and ending with the words "Field corn," and in column II delete the ten lines beginning with "Seed cut from ears of white sweet corn" and ending with "Seed cut and scraped from ears of field corn" and in column III the eight lines beginning with "Whole grain or whole kernel" and ending with "Cream style or crushed."

b. In § 52.990 (c) (3), delete subdivision (i) and renumber subdivision (ii) as subparagraph (3).

c. In § 52.990 (f) (1), delete the second sentence.

Any interested person whose appearance was filed at the hearing may, within fifteen days from the date of publication of this tentative order in the *Federal Register*, file with the Hearing Clerk, Federal Security Agency, Room 5440, Federal Security Building, Fourth Street and Independence Avenue SW., Washington, D. C., written exceptions thereto. Exceptions shall point out with particularity the alleged errors in this tentative order and shall contain specific references to the pages of the transcript of the testimony or to the exhibits on which such exceptions are based. Such exceptions may be accompanied by a memorandum or brief in support thereof. Exceptions and accompanying memoranda or briefs shall be submitted in quintuplicate.

Dated: June 14, 1951.

OSCAR R. EWING,
Administrator.

Forthcoming Meetings

June 27-29—National Pickle Packers Association, Midyear Meeting, Sheraton Hotel, Chicago

June 28-29—California Olive Association, Annual Technical Conference, Hotel del Coronado, Coronado, Calif.

July 18-27—Indiana Canners Association, Annual Mold Count School, Purdue University, Lafayette

August 1-10—Association of New York State Canners, Inc., 14th Annual Mold Count School, Jordan Hall, Geneva Experiment Station, Geneva

October 11-12—National Canners Association, Meeting of Board of Directors, Mark Hopkins Hotel, San Francisco, Calif., and Dedication of N.C.A. Western Branch Laboratory building, Berkeley, Calif.

October 24-26—National Pickle Packers Association, Annual Meeting, Sheraton Hotel, Chicago

October 26-27—Florida Canners Association, 30th Annual Convention, Palm Beach Biltmore Hotel, Palm Beach

November 9—Ozark Canners Association, Fall Meeting, Colonial Hotel, Springfield, Mo.

November 12-13—Wisconsin Canners Association, 46th Annual Convention, Schroeder Hotel, Milwaukee

November 15-16—Indiana Canners Association, Annual Convention, French Lick Springs Hotel, French Lick Springs

November 19-20—Pennsylvania Canners Association, Annual Convention, Penn Harris Hotel, Harrisburg

November 26-27—Michigan Canners Association, Fall Meeting, Fantland Hotel, Grand Rapids

November 29-30—Tri-State Packers Association, 48th Annual Meeting, Philadelphia

December 6-7—Association of New York State Canners, Inc., 66th Annual Convention, Hotel Statler, Buffalo

January 19-23—Annual Conventions of National Canners Association, National Food Brokers Association, and Canning Machinery & Supplies Association, Atlantic City, N. J.

February 14-15—Ozark Canners Association, 44th Annual Convention, Colonial Hotel, Springfield, Mo.

PUBLICITY

Story on Canned Tomatoes Featured in Newspaper

A long illustrated story on canned tomatoes, with pictures of field, plant and recipe, entitled "Canners Make Tomatoes A Year-Round Favorite," appeared in the June 14 issue of the Dallas, Tex., *Times Herald*. This was the second article on canned foods that Dorothy Sinz, food editor, has featured within a short time.

"Years of scientific research and experimentation have made it possible for the shopper to purchase the outstanding product of today. There is much painstaking labor necessary to move the tomato crop from the vines to the table—a most important link in the chain of the 'Life Line of America,'" said the author in presenting a history of canned tomatoes.

"The industry as a whole carefully screens selective strains and varieties of tomatoes, and experimental work is always being done to improve the strains. It is pride in the finished product which leads to this intensive study," began the discussion on growing and harvesting tomatoes for canning. The article also included a word picture of the canning procedure, and ended with pointers to help homemakers in the selection of canned tomatoes, and recipes with photographs.

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